The Egyptian Higher Education System: Towards Better Quality in the Future

Nahla M. El Sebai*
The Egyptian Cabinet, Information and Decision Support Center
Egypt

Abstract

The main aim of this article is to suggest futures-oriented solutions for the problem ofdecreasing quality of the higher education system in Egypt. To achieve this aim the article started with referring to the mega driving forces in society and higher education in the 21st century, a background about the Egyptian education system, and the main challenges facing it.

Possible, probable, and preferable futures are then defined. According to the preferable futures a set of short and long-term recommendations for improving the quality of the higher education system are presented in the last part of the article.

Key words: Higher education, Quality, Mega trends, Agent matrix, Possible, probable and preferable futures

Transformations in the purpose and scope of higher education[1] have taken place in recent decades. Many public officials throughout different countries, especially developed ones, have come to hold ambitious goals for higher education. It is now perceived as a means to foster economic growth – through its capacity to create both a highly skilled workforce and research that underpins a knowledge-based economy. Furthermore, it is recognized as a principal instrument for the fostering of social cohesion, widely dispersing the benefits of economic growth.

Higher education has expanded in many countries from the number of enrollments point of view. And it has simultaneously become much more diverse in its providers, in its learners, in the range of skills and training it provides, and in connection to the commercial life of knowledge-based economies.

* I thank Dr. Fabienne Gaux-Baudiment Head of the World Futures Studies Federation and Progective research center for her continuous support in making this paper a reality, through her constructive comments which have given this paper the depth which would have been impossible without. Thank you for your time and effort.

In response to this expansion of the scope and purpose of higher education, many governments have made fundamental changes to the organization of higher education systems, and to the means by which they exercise authority over higher education institutions (OECD 2006).

In Egypt, "modernizing education" is officially described as one of the country's top priorities. President Mubarak's 2005 Election Program considered education as Egypt's main gateway to the future. *Developing higher education and establishing a link between education and the labor market* had been two of the main topics on the president's electoral platform. However modernizing education in Egypt needs a comprehensive strategy that takes into account the broader context of socio-cultural emerging global structures, as partial solutions have proven to be a problem in themselves; a good example of this is the 6th year in primary education which has caused a lot of confusion[2].

The main aim of this paper is to suggest futures-oriented solutions for the problem of the decreasing quality in the higher education system in Egypt. In achieving this aim, the three main phases of all futures-oriented approaches will be used. These three phases are[3] *Understanding* the present and past evolution from a dynamic point of view, *Imagining* the possible and desirable future from the basis of a problematic system, and a *Proposing* phase which is a phase of discussion of the results and recommendations.

Given the above-mentioned aim, this paper is divided into three parts. The first part consists of a description of the context of socio-cultural emerging issues within the "glocal" structure, a background on the current education system in Egypt, and the main problems and challenges facing it. The Possible and desirable futures taking into account the blocks that make it difficult to escape the current situation will be presented in the second part. Alternative short (for the next 5 years) and long term (next 30 years) solutions and recommendations will be suggested in the third part.

Part I: Present and past evolution of the current higher education system in Egypt

This part starts with an analysis of the main driving forces in society and higher education in recent years which represent the context in which higher education operates, followed by a background about the Egyptian higher education system, and finally the main problems and challenges facing it.

Mega Driving forces in society and higher education

Two sets of integrated factors that represent mega trends driving the developments in society and higher education in the early decades of the 21st century could be identified. These trends have structural implications for both society and higher education and thus provide the context in which other conditions and trends will operate.

The first one of the general social factors is *Information/ Communications Technology*: The continued development of information and communication technology (I/CT) and its application to all activities is reducing the barriers of time and space

Table 1: General Society Mega Driving Forces

GENERAL SOCIETY MEGA DRIVING FORCE	IMPLICATIONS FOR SOCIETY AND HIGHER EDUCATION
1. Information/Communications Technology: The continued development of information and communication technology (I/CT) and its application to all activities including the teaching-learning process and academic administration	1a. Changes in the way work is accomplished and learning occurs – including the delivery of education services and the conduct of research. 1b. Increased opportunities for distance education and training 1c. Increased commercial production of online courseware for all educational levels 1d. Continuous need to update I/C Technology and associated skills
2. Information/Knowledge Economy & society: The continued emergence of a knowledge (information) based economy and society will change expectations for the role and performance of social institutions including higher education.	2a. Increasing (higher) changes in the competencies (knowledge, attitudes, skills) expected of the workforce – including I/CT competencies 2b. Changes in how competencies are certified 2c. Increased reliance on large-scale data basis economic and research activities. 2d. Incoming students will have higher I/CT competencies and expect higher levels of I/CT as part of their HE experience. 2e. Employers will expect higher levels of I/CT competencies from HE graduates.
3. Globalization: The continued globalization of economic and social activities is increasing the interaction and interdependencies between nations.	3a. Global trend for organizations to seek strategic alliances with prestigious partners. 3b. Increased global transactions of all types including business, tourism, educational, and even criminal activities. 3c. Increased use of international alliances to create virtual organizations – including universities and campuses

Source: Florida International University, Scanning the Horizon. "Mega Driving Forces in Society and Higher Education."

and changing how we deliver services - including the teaching-learning process and academic administration.

The second is *Information/ Knowledge Based Economy and Society*: The continued emergence of an information/knowledge based economy and society is changing the expectations we have for social institutions – including higher education. This development is characterized by a shift from an industrial (energy based) economy to a service and information/knowledge based economy with more and more people becoming involved in the generation, collection, storage, editing, retrieving, and analysis of data and its transformation into information.

The third is *Globalization*: The continued globalization of economic and social activities is increasing the interaction and the interdependencies among nations. Globalization is characterized by the increased number of people and activities (transactions) that cross national borders, and the resulting reduction in the importance of

Table 2: Higher Education Mega Driving Forces

HIGHER EDUCATION MEGA DRIVING FORCE	IMPLICATIONS FOR SOCIETY AND HIGHER EDUCATION
4. Increased Economic Role of Higher Education: The shift to an information/knowledge-based economy is increasing the economic value of competencies (knowledge, attitudes, skills) traditionally associated with higher education leading to an increased emphasis on the economic role of higher education.	4a. Increased expectations that HE will directly contribute to the economic well being of individuals, local communities, regions, and the nation. 4b. Increasing (higher) changes in the competency (knowledge, attitudes, skills) expected of the workforce – including I/CT competencies 4c. Incoming students will have higher I/CT competencies and expect higher levels of I/CT as part of their HE experience. 4d. Employers will expect higher levels of I/CT competencies from HE graduates.
5. Increased Competition: Competition is increasing for the education and training services traditionally associated with higher education.	5a. Greater numbers of HE providers (public, private, corporate) will compete for enrollments and resources. 5b. Increased availability of distance education opportunities and virtual universities. 5c. Increased global competition for top students candidates. 5d. Emergence of new technology and structures to certify individual performance and competencies.
6. Increased Consumerism & Accountability: The use of consumerism principles (the application of knowledge based assessments) is being extend to decision about higher education by students and other stakeholders.	6a. Increased national and global emphasis on quality, effectiveness, efficiency, and improvement– accountability 6b. Increased emphasis on the concept of "value added" – including student learning outcomes 6c. Changes in the funding structures of HE – including the potential for a higher education voucher system. 6d. Changes in the management structures of HE to emphasize accountability – quality, effectiveness, efficiency, and improvement

Source: Florida International University, Scanning the Horizon. "Mega Driving Forces in Society and Higher Education."

national borders for both economic and social activities.

Factors impacting on Higher education are: *Increased Economic Role of Higher Education*: The shift to an information/ knowledge-based economy is increasing the economic value of competencies (knowledge, attitudes, and skills) traditionally associated with higher education. This, in turn, leads to an increased emphasis on the relationship between education and the economy and expectations for educational contributions to economic development on all levels – individual, local, national and global.

Increased Competition: Comp-etition is increasing for the education and training services traditionally associated with higher education. Increases in competition are characterized by the: 1) entry to the field of new competitors - corporate universities, etc.; 2) movement of competitors (traditional or new) into new markets because I/CT reduces the limits of time and space; 3) emergence of new ideas concerning the certification of competencies.

Increased Consumerism and Accountability: Major clients and stakeholders (students, parents, employers, and society) are increasing their use of consumer principles (the application of knowledge based assessments) to make choices about higher education issues. This is reflected in increased demands for accountability in terms of demonstrating capabilities, spending, the delivery of services, and the quality of results

Each of these factors will present opportunities or threats for the higher education institutions depending on how these institutions respond to them and their associated developments. The following two tables present an overview of the implications for the general society and higher education presented by these factors.

Background[4]

One of the important implications of the new driving forces in higher education mentioned in the previous context is the increasing national and global emphasis on quality, effectiveness, efficiency, and improvement accountability in higher education, so it is important to evaluate the Egyptian higher education system regarding its quality level. This background tries to portray the Egyptian higher education system as a first step towards identifying the main challenges and problems facing it and affecting the quality level it has.

There are two parallel education systems prevailing in Egypt: the secular system and the religious, or Al-Azhar system which enrolled around 9% of the country's total number of students in the year 2004[5]. The secular system is organized as follows:

(a) The first level known as *basic education* covers the first nine years of state sponsored schooling (6 years known as primary schools and 3 as preparatory schools) starts at the age of six.

(b) The second level divides students between three-year general academic *secondary schools* and three or five-year vocational schools.

(c) The third level is the *higher education* level.

The higher education sector in Egypt is comprised of universities and institutions of technical and professional training. The system in 2005 is made up of 12 public universities, 52 public non-university institutions, and 7 private (for profit) universi-

ties. Of the 52 non-university institutions, 47 are two-year middle technical institutes (MTI), and 5 are four or five-year higher technical institutes.

Depending on the field, a bachelor's degree is obtained in between three and seven years of study, for example 4 years for a bachelor in commerce and 7 years for a basic medical degree. Entry into the secular university system is based on the results of the Secondary Leaving Examination Certificate, and is highly competitive. Students can not just register to whatever faculty they want to but they are allocated according to the levels they attained in their Secondary Leaving Examination Certificate. For example, in 2006 if a student wants to go to the faculty of medicine he/she must get at least 97% of the full marks and for the faculty of engineering it is around 92%. Traditionally, only students attending general academic secondary schools were eligible to matriculate; however since 1970 universities have been enrolling some students from vocational schools. The Placement Bureau of the Ministry of Higher Education controls admission in university.

Higher education in Egypt can be categorized into the public higher education sector, comprised of public universities and non-university institutions, which is dominant and large, and the private higher education sector mainly comprised of a small number of private universities.

Although the American University in Cairo (AUC) has existed since the year 1919 as a private university, Egypt only legalized Egyptian private universities in 1992. With the exception of the American University in Cairo, private higher education institutions in Egypt are perceived by many as institutions that *"sell"* degrees to those who can afford them. The establishment of private universities in Egypt has been opposed on the moral grounds that the ability to pay fees should provide no advantage in access to higher education. Critics of private higher education in Egypt also argue that private higher education is at odds with the principles of the *1952 Revolution*, which called for equal access to educational opportunities for all citizens.

Egypt, which has one of the largest higher education systems in the developing world in terms of the number of students, 2.2 million students in 2004[6], relies on two-year technical institutes to continue providing access to all secondary school graduates while protecting the already overloaded universities. Due to the lack of adequate financial, human, and material resources, most of these institutes provide poor quality education and are perceived by some observers as no more than *"academic parking lots"* for surplus students.

Approximately 30 percent of the 18-22 age group were enrolled in higher education in 2004. Three quarters attended universities, and 25 percent were enrolled in non-university sector institutions. The overwhelming majority (around 82 percent) of all students attended public institutions.

In official discourse, education in Egypt is "free" from basic to higher education. The government provides the lion's share of funding to both education systems i.e. secular and religious. Only parents of children who attend private schools, which also receive some government funding, pay tuition fees. While officially the state is responsible for financing higher education in Egypt, the state's share of higher education finance for universities was reduced to 85 percent of the universities' needs in 1994-1995, leaving the universities to generate the remaining 15 percent through vari-

ous revenue diversification strategies.

A number of revenue diversification strategies adopted by Egyptian universities are listed here:

Charging nominal tuition fees for alternative academic programs that are perceived to be of high quality. For example, state universities have introduced foreign language programs for which they charge tuition. Some public universities charge L.E1,000 (around $280 US)[7] as tuition for a degree program in Commerce which uses English as a medium of instruction.

Also, in recent years, a new system of admission to the faculties of Law, Commerce, and Arts allows a less qualified student to obtain a place on paying an admission fee of L.E 360 (around $100 US). The impact of this practice on the quality has been negative as manifested by a high number of repeating students in universities.

Egyptian students pay between £E30 and £E150 (8.5 and 42 US$) per year as a token tuition fee in government funded universities. In addition, they also pay necessary equipment, books, transportation, and residence fees. By comparison the American University in Cairo charges a tuition fee of US$ 2,813 (around 10000 £E) for 6 credits and US$ 469 (Around 1700 L.E) for each additional credit.

Specialized university centers generate incomes via different means; For example cooperation with industry, patent rights, provision of continuing education to industrial employees, access to laboratory and scientific equipment, manufacturing intermediate industrial products, language instruction, and private donations, especially for student fellowships.

Problems and Challenges Facing Higher Education in Egypt

A number of previous studies emphasized that the Egyptian higher education sector faces a number of challenges including:

(i) antiquated system-wide governance and management; (ii) low quality and relevance at the university level; (iii) low quality and relevance at the middle technical level; and (iv)limited fiscal sustainability of publicly financed enrollments.

The problem of financially unsustainable enrollments is related to the dramatic increase in enrollments in university education. For example, enrollments increased by 42 percent between 1997/98 and 1998/99 leading to an 8 percent decline in per-student spending that exacerbated disparities in resource allocation between faculties (World Bank 2002).

This dramatic increase in enrollments may be explained by several factors including:

- The demographic increases in the total number of population and consequently in the number of population at the age group of 18 to 22.
- The high unemployment rates which make it more attractive to enroll in higher education than remaining unemployed.
- The third factor is a social one and is related to the way the Egyptian society is thinking about handicraft jobs; as one is generally considered to be in a lower social ranking in this type of career. A number of students are just demanding

higher education as a mean to move from their social class to a more prestigious one.

While the overall expenditure on education as a proportion of GDP has grown from 3.9 percent in 1991 to 4.8 percent in 2004 with higher education receiving a 28 percent share of total expenditure in 1998, the dramatic growth of the higher education student population in Egypt poses a serious problem in financing higher education (Table (2) in the appendix). This also poses serious problems on the already decreasing quality, which is a serious problem to face in a world moving very fast toward globalization and more competitiveness.

To have a better understanding of the challenges and problems facing higher education in Egypt it is necessary to describe the main acting agents in the system, the interactions between them, and the main problems facing them.

The main acting agents in the higher education system in Egypt are the state, the student, the family, and the professor. *The state* is the Provider and sponsor of the majority of the higher education services (82% of students are enrolled in public institutes). *The student* is the user of the higher education service and the output of the system. The student is also the link between all the agents involved in the higher education process. *The professor* has many responsibilities including teaching, choosing the textbook, and evaluating the students performance. *The family* is a sponsor of a part of the higher education costs, and determines the number of demands on higher education because of demographic and cultural reasons.

The following matrix shows the main agents in the higher education system in Egypt and the problems in the interaction among them, in line with the weight of each agent in affecting the main question of the quality of the higher education based on this analysis.

According to the analysis of the agent matrix and as summarized in the influence and dependency graph, the state and the family are the most influential agents in the system. The problems imposed by the two agents have higher weights according to some points of view compared to the problems the other two agents impose on the system.

The main problems the state is responsible for include, antiquated management and governance of the higher education system, limited governance of the professors duties, low per-capita income in general and low professors' income, and insufficient classrooms and other facilities. Some of the most influential problems imposed on the system by the family are the demographic pressures, the unsuitable home study environment, and unbalanced diet or nutrition.

The student is the most affected agent by the problems facing the higher education system. The main problems the student face are insufficient classrooms and other facilities, out of date curricula, insufficient guidance and supervision by professors, out of date evaluation methods and other problems and difficulties imposed by the families.

The professor is the least influential on the system compared to the other agents; however, the professor is responsible- at least partially- for a number of very serious problems including out of date curricula and evaluation methods, and insufficient guidance and supervision given to the student.

Table 3: The Agent Matrix[8]

	State	Student	Professor	Family	
State	The Provider and sponsor of the majority of the higher education services (82% of the total number of students)	- Insufficient class rooms and facilities - Antiquated system-wide governance and management(3)	- Low income - Insufficient training and weak links with international universities - Limited governance(2)	- low per capita income and poverty - Unemployment problems - Low quality of public services(2)	7
Student	- High level of demand on the higher education(1)	The user of the higher education service and the Output of the system, also the link between all the agents involved in the higher education process	- students with Low incentives to participate in the learning process don't encourage professors to do their best - Large number of students make it impossible for the professors to give enough time for every student(2)	- More pressures on the already limited budget of the families(2)	5
Professor	- Demands for higher wages(1)	- Out of date curricula - Insufficient guidance or supervision - Out of date evaluation methods(3)	Responsible for: - Teaching - Determining the material - Evaluation of the students	- Private teacher costs(1)	5
Family	- Higher demand on Governmental subsidies to satisfy the students needs - Possible security pressures - Demographic pressures(3)	- Insufficient financial resources for supporting the education process - Unsuitable environment for studying and Unbalanced diets - social class, cultural values pressures(3)	- Private lessons and corruption(1)	Sponsor of a part of the higher education costs and determining the number of demand on higher education services because of demographic and cultural reasons	7
	5	9	5	5	24

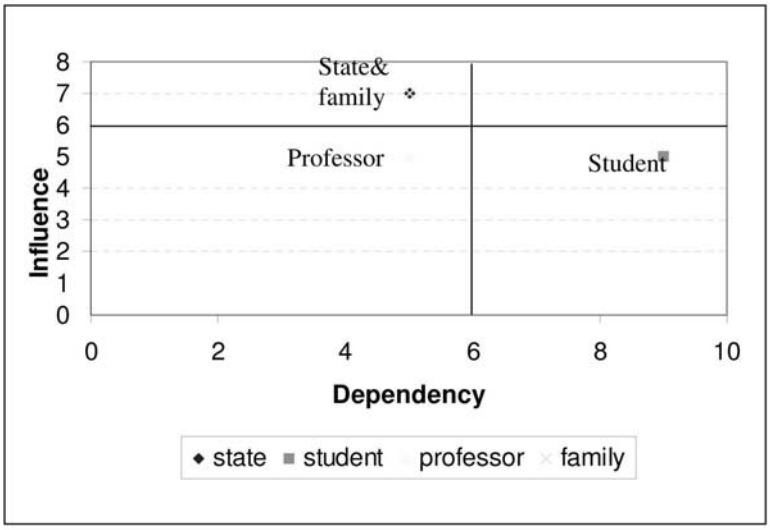

Figure 1: Influence and Dependency Graph

Part II: The Possible, Probable and Preferable Futures

To achieve the main aim of this paper-which is suggesting futures-oriented solutions to the problem of decreasing quality of the higher education system in Egypt- it is necessary to know what a preferable future may look like.

The current section starts with defining a range of possible futures bounded by a best case "utopian" and worst case "dystopian" scenario. Then as a subset of what is possible, a range of probable futures will also be defined. Finally, the section will end with defining a preferable future from among what is probable.

Possible Futures

The range of possible futures, as based on the current reality (present) and the invariant factors (at least within the given horizon) is so large, that we need to delimit it. The limits are given by the "utopia" and the "dystopia" following scenarios.

The best case "Utopia" Scenario

In an utopian scenario for the future of higher education we can imagine that the demand for enrollments will decrease due to demographic changes that would decrease the number of the population in the age group 18-22 and due also to changes in the social culture regarding higher education. We can also imagine that the financial capacity of the state may dramatically increase due to, for example, unexpected natural gas discoveries. In this case the student's share in the overall expenditure will increase. We can also imagine that the increase in the financial capacity of the state will lead to better and more updated curricula, research and evaluation procedures, better environment for professors specially regarding wages and the result is higher

quality and increased levels of success for graduates competing in the job market. We assume that the previous conditions will lead to an increase in the degree of the openness in the higher education system by allowing higher proportions of the population in the age group of 18-22 to enroll in higher education.

The worst case "Dystopia" Scenario

In the worst case for the future of higher education we can say that the opposite of the Utopia scenario is a possibility. The demand for enrollments would dramatically increase due to a prohibition on the use of contraceptives, supported by a number of Moslem fundamentalists. In this scenario the financial capacity of the state will decrease due to several possibilities which may include the depletion of the oil resources and hence the increase in oil imports, and the increase in food (specially wheat) imports due to the dramatic increase in the population. In this case the share of the student in the total expenditure will decrease. Due to the decrease in the expenditure share the quality of the higher education will decrease and the capability of the university graduates to compete in the jobs market will decrease. The degree of openness in the higher education system – measured by the percent of the students enrolled in higher education to the population in the age group of 18 to 22 years old- will decrease.

Probable and Preferable Futures

In the area lying between these two limit-scenarios many things are probable, not all of which we would want to support.

One of the probable scenarios is that the high population growth in higher education will continue, and the state will commit itself to maintain the share of 18-22 age group enrolled in higher education at a level not less than 20 percent (which is an official policy). This would require on average an additional 60,000 new enrollments in higher education for the next five years (World Bank 2000). The government has no financial ability to do this without a decrease in the expenditure per student. Because of this situation, the quality of higher education services will decrease more and more as the expenditure per student will be less than the current level, and graduates from the public education system may not be able to compete in the jobs market. More demand on private higher education will emerge, and the media, opposing parties, and the Egyptian people would object to this situation and more unrest would evolve.

Preferable futures are those we positively hope for and work to build out of what is probable. But what criteria determine what is preferable? Some of the criteria available for constructing images of preferable futures are related to our experience in higher education system and Egyptian society. Given this experience, any preferable future scenario is a scenario that takes into consideration the following values:

- Quality of higher education
- Equality of opportunity and access
- Freedom for higher education institutions
- National culture and identity

- Choice of students

Starting from these base values a set of suggestions for improving the quality of the Egyptian higher education are presented.

Part III: Suggestions and Alternative Solutions

Enhancing the quality of the higher education system in Egypt requires immediate actions by the state and other actors to solve the main "futures nodes"[9] or the structural problems -mentioned in the agent matrix- facing the higher education system and which make it difficult to enhance its quality.

For example, the state must develop a long-term plan and take actions to deal with the problems it is directly responsible for. At the same time the state, NGOs and families have to cooperate to face the problems the families are responsible for, as the families would not be able to solve those problems with no help from other partners. The main target of the plans and actions must be the student, however the professor must be taken into consideration as solving the professor's financial and other problems would lead to solving the problems he is responsible for.

In dealing with those problems, differentiation should be made between the solutions suitable for *the short term* (when it is difficult to change the demographic causes of increasing demand on higher education, and when it is also difficult to completely change the social and cultural values responsible for this), and the *long term* (when the effects of the current efforts made to change demographic features and cultural values will begin to show up). A set of short-term and long-term suggestions to deal with these problems according to what is considered as preferable will now be considered.

Short term suggestions

In the short term (5 years) there are some actions that can be taken and would have fast effect on the quality of the higher education system. These actions do not need huge funds, only a relatively small increase in the higher education budget would be needed. These actions will deal mainly with the following problems:

- The antiquated management and governance of the higher education system.
- The out of date curricula and evaluation methods.

In dealing with these two problems the Egyptian higher education institutions can benefit a lot from being linked to other institutions in different countries in Europe, Asia, and America and can benefit also from cooperation with international partners. For this link will transfer the best practices and experiences from more successful countries to Egypt. However, caution is needed as not all the best practices are transposable.

Another suggestion in the short run is to deal with one of the problems clear in many Egyptian universities; which is the number of subjects per semester that are in many cases outnumber in other countries. This big number of subjects needs more professors and more money, so dealing with this problem may increase the quality in the short run. Yet decreasing this number would also increase the quality, without increasing the cost, by providing a more in-depth knowledge in students.

Long term suggestions

In the long term, we can imagine two main sets of futures-oriented recommendations for enhancing the quality of higher education in Egypt. The point of departure in the first set is *Funding* and how to increase it, whether it will depend mainly on market forces or on restricted set of providers. In the second one the main concern is the increasing *enrollments* in the higher education system and how to deal with it.

Funding

One of the suggested solutions is to increase the role of market forces in financing higher education. The rise of market forces in higher education can be ascribed to state resource (budgetary) constraints and the pressure of other needs like food and health on resources (lowering the priority level of higher education on the financial agenda). The new rise of market forces should not necessarily be viewed in an ideological way: believing or not in the value of the market economy.

In this set of recommendations more private higher education institutions could be established with certain quality standards for example the ISO 9000 accreditation (to make sure that the people will not think of these universities as institutions selling degrees to those who are able to pay for it) and with a guarantee of respecting the national identity and culture. At the same time more participation by students in funding through tuition fees could be one possible solution. This would also help some students to become more involved in their studies.

This solution would lead to better educational provision due to the following changes:

- More funding will be available so sufficient classrooms and other facilities could be supplied.
- Professors will receive better salaries so they will not have to work on other jobs, and in turn will have more time for teaching, supervision, and evaluating students. They will also be able to have better training and more capability to participate in international research and events.
- Updating curriculum will be easier with the availability of more funding.
- Only those who are interested in higher education, willing and able to achieve their goals will enroll, and hence those who just enroll because they do not have anything else to do and the higher education is free will not continue.
- It could also help to hire foreign professors that could thus bring a fresh air and methods in the Egyptian higher education system.

In this case, the *question* of equality of opportunity and access is of great importance as students belonging to poor families will not be able to enroll in higher education. In this case the state will have to support gifted yet disadvantaged students via different ways, whether they will be totally exempt from tuition fees or via grants or facilitated loans. Another possible solution is to establish publicly provided educational programs with a *success-dependent* cost participation for university students.

Enrollments

Concerning the increasing demand on enrollments, the following set of recommendations could make this problem less pressing.

- More efforts by the state and NGOs to decrease the annual birth rate of Egypt. This rate reached 26.7 new births per thousand of the population in 2004, which

is a very high rate compared to other countries with similar population[10].

- Efforts to change the social and cultural values responsible for increased demand on higher education. For example, changes in the way the society considers handicrafts.
- Finding other solutions for the unemployment problem, instead of the temporary solution of just letting the students enroll in the university and hence delaying their entrance in the labor force for 4 or five years. Suggested solutions may include supporting the graduates from vocational schools and institutes to start their own small businesses, and involving more youth in the national service (civil or military).
- Making the best possible use of Information and Communication Technologies (ICT) as an important driver for change. For example, more efforts can be made to figure out how distant learning can help in increasing the quality of higher education.

Conclusion

Many theories and studies are emphasizing the great importance of human capital for economic growth. Education is seen by many as the most important investment in human capital.

Analyzing the status quo of the current Egyptian higher education system revealed a set of problems and challenges facing it, and affecting its quality level in a negative way. The situation will be even worse in the future if the current trends continue.

This problem of decreasing quality is very serious in a world moving rapidly toward globalization and more competition. This makes the improvement of the *quality* of education a necessity for any country that wants to compete in the current and the future international environment.

A number of short and long term recommendations to improve the quality of the higher education system are presented in this paper. The main recommendations for the short-term are to link the Egyptian higher education institutes to those in more advanced countries, and to decrease the number of subjects per semester. In the long-term the main recommendations are to increase the role of market forces in financing higher education, to change demographic trends to decrease demand on higher education, and to find solutions for the unemployment problems.

Correspondence

Nahla M. El Sebai
The Cabinet Information and Decision Support Center
l, magless el-shaab St., Kasr El-Aini,
Cairo, Egypt, Post Code 11582,
P. box 191. Magless El-Shaab
Email: nahla@idsc.net.eg

Notes

1. By higher education this paper means post secondary education at colleges, universities, and non- university education offered by technical, industrial and commercial institutes.
2. Before the school year 1988/1989 the first level of the secular education system (more information about the Egyptian education system is available in the background) consisted of 9 years. The first 6 years are known as primary schools and the second 3 years are called preparatory schools. Starting from 1988/1989 the 6th year was cancelled, and students passed both the 5th and 6th year moved to preparatory schools. This caused almost a doubling of the number of students entering higher education in 1995/1996 and put a lot of pressure on the higher education institutes. Again in 2005/2006 this 6th year is returned, which means that 6 years later there will be a year with no students entering higher education except those who will repeat the general secondary final year. The bad thing about these changes is that it is political decisions made by 2 different ministers and the purpose (At least in terms of its effect on the quality of the education system) was not clear at least to the public.
3. According to the French "prospective" (i.e. French foresight).
4. In this section the current paper has revised, updated and added to a brief description of the higher education system in Egypt made by the University of Buffalo, available on the following website: http://www. gse.buffalo.edu/org/IntHigherEd Finance/Egypt.pdf
5. Table (1) in the appendix, contains basic statistics about the Egyptian higher education system.
6. Table (2) in the Appendix compares Egypt to a number of developed and developing countries with similar population.
7. One US dollar= 3.54 Egyptian Pound on average in the year 2000.
8. The number in each bracket is the weight attributed to the importance of this relation(link); then this number is added, by line (influence) and by column (dependency), to give the coordinates of each agent in the graph.
9. cf. the "futures nodes" concept and method in Goux-Baudiment. 2000.
10. For comparison this rate is 15.7 in Thailand, 12.15 in France, 17.2 in Turkey, 16.3 in Iran and 8.9 in Italy in the same year.

References

Florida International University, Scanning the Horizon. "Mega Driving Forces in Society and Higher Education." Accessed http://www.fiu.edu/~pie/driving2. htm on August 15th, 2006.

Gaux-Baudiment Fabienne, Donner du futur aux territoires. 2000. *Guide de Prospective Territoriale à L'usage Des Acteurs Locaux*. Lyon: CERTU. P. 275.

OECD. 2006. Programme on Institutional Management in Higher Education. "Higher Education: Quality, Equity and Efficiency." Accessed http://www. oecd.org/dataoecd/46/20/37126826.pdf#search=%22higher%20education%3A%20quality%2C%20equity%20and%20efficiency%22 on August 15th , 2006.

OECD. 2003. Project on the Future of Universities. Experts meeting. June 24th-25th. Available: http:// www.mext.go.jp/a_menu/kokusai/forum/04022701/004/009.pdf

University at Buffalo. "A Brief Description of the Egyptian Higher Education System."

Available: http://www.gse.buffalo.edu/org/ inthigheredfinance/Egypt.pdf
World Bank. 2000. "Arab Republic of Egypt, Higher Education." Report # PID9033.
World Bank. 2002. *Arab Republic of Egypt, Higher Education Enhancement Project (HEEP).* Washington, D.C.: World Bank.

Appendix

Table 1: Education Statistics in Egypt in 2004

Indicator	Value
Total Number of students enrolled in Higher Education	2.4(millions)
Total Number of Students in Private Higher Education Institutes	397219(students)
Total Expenditure on Education	26.178(billions of Egyptian Pounds)
Total Expenditure on Higher Education	7.518(billions of Egyptian Pounds)
Number of Students in Religious Higher Education(Al Azhar)	0.4 millions
Number of Students in religious Pre-university Education	1.44 millions
Number of Public Universities	12
Number of Private Universities	7
Total Number of Students in Pre-University Education (Including Al-Azhar)	16.9(millions)

Source: The Egyptian Cabinet of Ministers, Information and Decision Support Center(IDSC) website: www.idsc.gov.eg

Table 2: Enrollments and Total Expenditure on Education in Egypt and in Other Countries

country	Population in 2000 (millions)	Enrollments in higher education in 2004(millions)	Total expenditure on education(% of GDP)in 2004
Egypt	64	2.4	4.8
France	59	2.02	5.6
Thailand	61	2.25	5.2
Turkey	67	1.68	3.6
Italy	58	1.85	4.7
Iran	64	1.7	4.9

Source: population data from World Development Indicators (WDI). 2005. CD-Rom and other data available on UNESCO website: http://stats.uis.unesco.org/ReportFolders/reportfolders.aspx